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RESPONSE TO DISCUSSION

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The paper[1] addresses the following two questions:

(1) When is it necessary to include the effects of non-classical damping?
(2) How can the SRSS and CQC methods be generalized to include these effects?

It was shown that, in the context of mode combination analysis, Warburton and Soni's parameter[2] is well suited for answering the first question. It was also shown how non-classical damping can be included in the SRSS and CQC methods in the simplest possible manner. The derivations are based on a real-valued, physically meaningful form for the modal responses, developed by Igusa *et al.*[3] and Veletsos and Ventura.[4] The final expressions, in equations (6) and (7), have the identical form as the original SRSS and CQC methods. The primary difference is in the correlation coefficient [equation (8)] which has an additional term to account for the important effects of phase. (The discusser has mistakenly presumed that this phase effect was not included in the proposed methods.)

The paper was submitted as a Short Communication; thus, there was insufficient space for a complete literature survey. It is noted here that if additional information about the seismic input is available, mode combination methods more complicated than the proposed SRSS and CQC methods would provide greater accuracy. For such situations, two appropriate choices are Villaverde's [Reference 7 in discusser's list] and Maldondo and Singh's [Reference 8 in discusser's list] methods.

REFERENCES

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